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CROSS REFERENCE TO RELATED APPLICATIONS

(Not Applicable)

STATEMENT REGARDING FEDERALLY SPONSOREDRESEARCH OR DEVELOPMENT

(Not Applicable)

BACKGROUND OF THE INVENTIONTechnical Field

This invention relates to the field of data retrieval and transfer, and more particularly, to the retrieval and transfer of demographic information and other information relating to an individual.

Description of the Related Art

When purchasing goods or services, consumers routinely provide information which can identify those consumers to the goods or service provider (merchant). For example, a consumer is typically asked to provide a merchant, such as a medical professional, with the following personal information: first name, middle name, last name, street address, city, state, zip code, telephone number, date of birth, email address, medical history, insurance information, and the like.

Conventional merchant data management systems typically require a consumer to manually fill out a questionnaire or a form to provide the aforementioned information.

An employee of the merchant can then take the form from the consumer and manually

enter the information into the merchant's system, whether that system is a paper based filing system such as an appointment book, or an electronic system implemented as a computer program. For example, if a consumer visits a physician or other medical service provider, the consumer likely will be required to fill out a form supplying the doctor with the consumer's relevant personal information and medical history. Having obtained the consumer's personal information, but before processing a transaction, the medical service provider typically will obtain that consumer's insurance information so that the bill for services rendered can be properly submitted to the insurer. Accordingly, the medical service provider must initiate a second process of verifying the consumer's insurance benefits through the consumer's insurance carrier.

Still, conventional systems for collecting consumer information, such as the systems mentioned above, can have disadvantages. For instance, manually and repetitiously providing consumer information on a paper form can become cumbersome for the consumer. Notably, even if a consumer has filled out a form for a particular merchant in the past, that merchant may periodically ask the patron to fill out another form to update the consumer's information within the merchant's system. Continuing with the previous example, a patient typically will visit a general medical practitioner before seeing a specialist. At the general practitioner's office, the patient will need to provide the general practitioner with various forms of personal, medical, and insurance information. Then, the general practitioner will need to obtain and verify the patient's insurance information with the patient's insurer. Upon being referred to and visiting a specialist, that patient again will have to provide the same information to the specialist.

If that patient checks into a hospital on the advice of the specialist, the hospital, similar to the general practitioner, will need to obtain and verify the patient's insurance information with the patient's insurer. Still, if follow up treatment is necessary after a hospital visit, for example physical therapy, that therapist also will need to obtain and verify the patient's insurance information. Thus, for each doctor, specialist, or medical service provider to which a patient is referred, that patient must repetitiously provide the same personal, medical, and insurance information to the medical services provider. Adding to the redundancy, each medical service provider must not only obtain the patient's insurance information, but also verify that information with the patient's insurer.

Another disadvantage of conventional systems for collecting consumer information can be that the process of collecting, entering, and maintaining such information can become cumbersome for the merchant as well. While maintaining such consumer information can be beneficial to the merchant, maintaining accurate and timely records also places a burden on the merchant. For example, the merchant must devote resources to collecting, entering, and maintaining the consumer information.

Another disadvantage of conventional methods of data management can be the risk of human error involved when the consumer fills out an information form, or when a merchant employee manually enters the consumer information into the merchant's system. Still, other human factors can lead to errors when consumer information is entered into a merchant system. For example, the illegible handwriting of a consumer can lead to an employee entering incorrect information into the merchant system.

SUMMARY OF THE INVENTION

The invention provides a method and system for collecting and transferring consumer information to a computer program in a user computer. Upon a user request for consumer information, the invention can retrieve that information from various locations within a computer communications network. Once retrieved, the consumer information can be transferred through the computer communications network to a computer program of the user's computer system. Specifically, the consumer information can be entered directly into a user interface, such as a character based user interface or a graphical user interface, of the computer program without the user having to manually type the information into the user interface. After the consumer information is transferred into the computer program, the user can process the information using any functionality provided by the computer program. For example, the consumer information can be used with regard to scheduling, billing, reporting, printing, or viewing.

One aspect of the invention can be a method for collecting and providing consumer information to a user. The method can include several steps such as authenticating a user to a service computer system and receiving from a requesting computer a request for consumer information from a user. Notably, the consumer information can include consumer demographic information, consumer insurance information, credit information, medical information, or public record information.

The request can identify a consumer. The step of retrieving the requested consumer information corresponding to the identified consumer from at least one network location can be included. The method further can include presenting the retrieved consumer

information to the user for verification. The consumer information can include at least one data item. Also, the method can include the step of transferring at least one data item in the retrieved consumer information to a corresponding field in a user interface in the requesting computer. The transferring step can use screen scraping technology.

5 Another embodiment of the invention can be a method for collecting and providing consumer demographic information and consumer insurance information to a user. The method can include receiving from a requesting computer a request for consumer demographic information from a user. The request can identify a consumer. The step of retrieving the requested consumer demographic information corresponding to the identified consumer from at least one network location can be included. The consumer demographic information can include at least one data item. The steps of presenting the retrieved consumer demographic information to the user for verification and receiving from a requesting computer a request for consumer insurance information from a user can be included. Notably, the request can identify a consumer. The method further can include retrieving the requested consumer insurance information corresponding to the identified consumer from at least one network location. The consumer insurance information can include at least one data item. Upon verification of the consumer insurance information by the user, the step of transferring at least one data item in the retrieved consumer demographic information or the consumer insurance information to a corresponding field in a user interface in the requesting computer can be included.

Another aspect of the invention can be a system for collecting and providing consumer information to a user. The system can include a buffer for receiving a user request for consumer information from a requesting computer and for receiving the consumer information from a specified network location. Notably, the consumer information can include consumer demographic information, consumer insurance information, credit information, medical information, and public record information. The system further can include a consumer information matching system for retrieving the consumer information and a transfer agent for transferring at least one item of the consumer information in the retrieved consumer information to a corresponding field in a user interface in the requesting computer.

The consumer information matching system further can include a benefits matching system for retrieving and matching consumer insurance information and a demographic matching system for retrieving and matching consumer demographic information.

Another aspect of the invention can be a machine readable storage, having stored thereon a computer program having a plurality of code sections executable by a machine for causing the machine to perform a series of steps. The steps can include authenticating a user to a service computer system and receiving from a requesting computer a request for consumer information from the user. The request can identify a consumer. Notably, the consumer information can include consumer demographic information, consumer insurance information, credit information, medical information, or public record information. The machine readable storage further can cause the

machine to perform the step of retrieving the requested consumer information corresponding to the identified consumer from at least one network location. The machine readable storage can cause the machine to perform the additional step of presenting the retrieved consumer information to the user for verification. The consumer information can include at least one data item. Also, the step of transferring at least one data item in the retrieved consumer information to a corresponding field in a user interface in the requesting computer can be included. The transferring step can use screen scraping technology.

Another embodiment of the invention can be a machine readable storage, having stored thereon a computer program having a plurality of code sections executable by a machine for causing the machine to perform a series of steps. The steps can include receiving from a requesting computer a request for consumer demographic information from a user. The request can identify a consumer. The step of retrieving the requested consumer demographic information corresponding to the identified consumer from at least one network location can be included. The consumer information can include at least one data item. Also, the step of presenting the retrieved consumer demographic information to the user for verification can be included. The machine readable storage further can cause the machine to perform the step of receiving from a requesting computer a request for consumer insurance information from a user. The request can identify a consumer. Additionally, the step of retrieving the requested consumer insurance information corresponding to the identified consumer from at least one network location can be included. The consumer information can include at least one

data item. Upon verification of the consumer insurance information by the user, the step of transferring at least one data item in the retrieved consumer demographic information or the consumer insurance information to a corresponding field in a user interface in the requesting computer can be included.

continued

BRIEF DESCRIPTION OF THE DRAWINGS

There are shown in the drawings embodiments which are presently preferred, it being understood, however, that the invention is not limited to the precise arrangements and instrumentalities shown, wherein:

5 Fig. 1 is a schematic diagram of an exemplary network configuration capable of utilizing a method of the invention.

Fig. 2 is a schematic diagram illustrating an exemplary system of the invention.

Fig. 3 is a flow chart illustrating an exemplary method of the invention.

10 Fig. 4 depicts an exemplary graphical user interface which can be used with the method and the system of the invention.

Fig. 5 depicts an exemplary graphical user interface which can be used with the method and the system of the invention.

Fig. 6 depicts an exemplary graphical user interface which can be used with the method and the system of the invention.

15 Figs. 7A and 7B depict exemplary graphical user interfaces which can be used with the method and the system of the invention.

Fig. 8 depicts an exemplary graphical user interface which can be used with the method and the system of the invention.

20 Figs. 9A and 9B depict exemplary graphical user interfaces which can be used with the method and the system of the invention.

Fig. 10 depicts an exemplary graphical user interface which can be used with the method and the system of the invention.

DETAILED DESCRIPTION OF THE INVENTION

The invention provides a method and system for collecting and transferring consumer information, such as consumer demographic information and consumer insurance information, upon a user request. For example, the user requesting such information can be a provider of goods and services (merchant). Once collected, the consumer information can be transferred to the user. Specifically, the consumer information can be transferred into a computer program in a user computer. The consumer information can be entered directly into a user interface of the computer program without the user having to manually type the information into the user interface. Notably, the user interface can be any of a variety of user interfaces including, but not limited to, character based user interfaces or graphical user interfaces (GUIs). Once the consumer information is transferred to the computer program, the user can process the information using the computer program. For example, the consumer information can be processed with regard to scheduling, billing, reporting, printing, viewing, or any other function available in the computer program.

It should be appreciated that the invention can be used to collect any individual information, such as court records and filings, traffic records, real estate records, and credit information, other publicly available information, or information provided by a paid for service. Thus, the invention can be used with regard to any information accessible from a network location of a computer communications network, such as the Internet.

Fig. 1 is a schematic diagram depicting an exemplary computer communications network configuration suitable for use with the present invention. As shown in Fig. 1, the configuration can include a merchant 100, a merchant computer system 110, a computer system 120, a Consumer Information System (CIS) 200, a computer communications network 130, and one or more network locations 140, 150, 160, and 170. Merchant 100 can be any person or entity conducting business or otherwise performing a service in which the merchant 100 has a need for consumer information. For example, merchant 100 can be a medical practitioner or a group of medical practitioners forming a medical practice, a hospital, an internet site requiring data entry, a retail store, a telephone sales office, an insurance office, or the like.

The merchant computer system 110 can be a conventional computer system for use in conjunction with the present invention. Alternatively, the merchant computer system 110 can be a portable computer system such as a handheld computer or other personal digital assistant with information processing capability. The merchant computer system 110 can contain an operating system suitable for controlling the various hardware components of the merchant computer system 110 and for execution of various computer programs. Also included in merchant computer system 110 can be one or more computer programs which can be associated with the operation of the merchant's business. For example, the computer programs contained within the memory of the merchant computer system 110 can include, but are not limited to, scheduling, inventory, billing, or form generation programs. Notably, the aforementioned computer programs are for example only. Accordingly, the invention is

not so limited by the particular type of computer program included in the merchant computer system 110.

Computer system 120 can be similar to the merchant computer system 110 as previously described, with the exception that computer system 120 can be an Internet Web server, for example the Apache Web Server. The computer system 120 can include the CIS 200 which can exist as one or more computer programs or plug-ins for use in the computer system 120. Functioning within computer system 120, the CIS 200 can receive merchant requests for consumer information. The merchant requests can be HTTP requests. Secured Socket Layer (SSL) protocol, HTTPS, or other security measures can be used to ensure secure exchange of information. Additionally, the CIS 200 can receive requests using Electronic Data Interchange (EDI), a standard format for exchanging data well known in the art. Responsive to those requests, the CIS 200 further can initiate and transmit requests for consumer information to one or more network locations. Similar to the merchant request, the CIS 200 can transmit requests using HTTP or EDI. Notably, SSL, HTTPS, or other security measures also can be used. The CIS 200 can receive the requested consumer information from the network locations, store consumer information, and transfer the received consumer information to the merchant computer system 110.

In requesting information from network locations, receiving that information, and displaying the information to the merchant, the CIS 200 can utilize screen scraping technology. Screen scraping technology can be programming that translates between legacy computer programs and newer user interfaces so that the logic and data

associated with the legacy programs can continue to be used. Additionally, screen scraping can include optical character recognition to convert graphically formatted data or graphics to data. For example, screen scraping technology can be used to convert a picture of a document, or an HTML document to usable text data. Data received from the legacy program can be reformatted for the screen of a different user interface such as a character based user interface or a graphical user interface including a Web browser. Additionally, user input from newer user interfaces, such as a graphical user interface or a Web browser, can be reformatted so that the request can be handled by the legacy computer program as if it came from a user of the older device and user interface.

Network locations 140 through 170 can include Internet Web servers hosting Web-based documents. Network locations 140 through 170 also can include databases which can contain consumer information, for example the consumer information requested by the CIS 200.

Communication between the various computer systems of Fig. 1 can be facilitated through the computer communications network 130, which can be any suitable computer communication network. For example, the computer communications network 130 can be the Internet where communication can be facilitated through TCP/IP, HTTP, and FTP protocols, each well known in the art. Alternatively, communication can be facilitated through direct network access, an Integrated Service Digital Network (ISDN) connection, or a series of direct dial up connections initiated by the merchant computer system 110 and the computer system 120. Notably, any

suitable method of connecting computers in a computer communications network can be used.

The CIS 200 can include one or more computer programs which can receive and process user requests for consumer information. The CIS 200 can collect the requested consumer information and transfer that information directly in a field of a user interface of the user's computer program.

A CIS 200 in accordance with the inventive arrangements is shown in Fig. 2. The CIS 200 can include a buffer 210, a Demographic Matching System (DMS) 220, a Information Matching System (IMS) 230, and a transfer agent 240. Each of these components can be included in the computer system 120. The buffer 210 can receive and store merchant requests for information. In addition, the buffer 210 can receive and store search request results and any other information necessary for providing the requested consumer information to a merchant.

The DMS 220 can receive a merchant request for demographic information from buffer 210 and process the received request. Notably, demographic information can include, but is not limited to, a consumer's first name, middle name, last name, multiple addresses such as a home and a work address including the city, state, and zip code, as well as telephone numbers, date of birth, email addresses, and other general information. Upon receiving a merchant request for consumer demographic information, the DMS 220 can identify the consumer for whom the merchant has

requested demographic information using an identifier corresponding to that consumer. Notably, the identifier can be a unique identifier such as a social security number.

Having identified the consumer, the DMS 220 can initiate one or more requests for that consumer's demographic information from various sources of demographic information. For example, the DMS 220 can access one or more network locations or Web sites such as <www.edatasolutions.com> which provides consumer demographic information via a computer communications network. Other examples can include submitting an HTTP request to a publicly accessible and searchable Web site. The DMS 220 can receive the requested consumer demographic information and match that information to the consumer identified within the merchant request.

The IMS 230 further can operate on a merchant request for consumer information. Similar to the DMS 220, the IMS 230 can identify the consumer for whom the merchant has requested additional information using the identifier corresponding to that consumer included in the merchant request. Notably, whereas the DMS 220 can obtain consumer demographic information, the IMS 230 can obtain any of a variety of additional information relating to the identified consumer. For example, the IMS 230 can request information including, but not limited to, insurance information, court records and filings, traffic records, real estate records, credit information, other publicly available information, or information provided by a paid for service. In the case where the IMS 230 retrieves insurance information, the IMS can be referred to as a Benefits Matching System. Insurance information can include, but is not limited to, the patient's insurer, group number, identification number, the specific policy parameters such as co-

pay amounts for various services as well as the percentage of expenses for such services covered by the medical insurer. Thus, the IMS 230 allows a merchant to verify a consumer's eligibility and the specific benefits provided by the consumer's insurer.

The IMS 230 also can receive the aforementioned information in response to initiating a request for such information. Once collected, the IMS 230 can match the received additional information to any previously received demographic information retrieved by the DMS 220. For example, the IMS 230 can match received additional information such as insurance information to previously received consumer demographic information using the consumer identifier. Further, in cases where the IMS 230 requests several different types of consumer information, the IMS 230 can match each type of received consumer information to previously received consumer information using the user identifier.

In an embodiment where the IMS 230 retrieves consumer insurance information, the IMS 230 can contain a consumer information data structure 235. The consumer information data structure 235 can include a listing of consumers and corresponding insurance carriers which have been identified as providing benefits to those corresponding consumers. Notably, this information can be obtained through data mining techniques, directly from insurance carriers, or alternatively, can be provided by consumers. For example, upon receiving a request for consumer insurance information, the IMS 230 can match the received consumer identifier to the associated consumer in the consumer information data structure 235. The IMS 230 also can determine one or more insurers associated with the consumer identifier from the

consumer information data structure 235. Thus, the insurance carriers associated with the particular consumer identifier can be identified as providing insurance benefits to the consumer identified by the consumer identifier. Accordingly, those insurance carriers can be queried for insurance information pertaining to the consumer identified by the consumer identifier specified by the merchant.

In another embodiment, the IMS 230 can retrieve so called "Doctor's Savings Plan" information and consumer credit information. For example, consumer credit information can be retrieved with Doctor's Savings Plan information where a patient has joined such a plan rather than carrying insurance. Under a Doctor's Saving Plan, the patient pays for services rendered rather than an insurance carrier. Though the patient pays for services, by joining the plan the patient gets the benefit of a favorable fee arrangement with the doctor. In particular, doctors, or their intermediaries, can agree to charge reduced rates for members of the plan. The rates can be similar or equal to the fees agreed upon between the doctor or doctor groups and an insurance carrier. Because the patient must pay any amount billed without the aid of insurance, the IMS 230 can retrieve the patient's credit information for the medical service provider to verify that the consumer has the means necessary to pay for services rendered. Thus, the IMS 230 can retrieve the patient's credit information and plan information, including fee arrangement information, membership details, and verification from the plan.

In another embodiment, the IMS 230 can retrieve auto insurance information from insurance carriers. In that case, the IMS 230 can retrieve policy details such as coverage limits, deductibles, as well as verification that a consumer is insured. For

example, automobile repair shops can verify that a patron is covered by automobile insurance before proceeding to work on an automobile. It should be appreciated that nearly any merchant who can receive payment from an insurance carrier can use the system to retrieve consumer insurance information from an insurer. Another example
5 can include a general contractor retrieving consumer insurance information pertaining to a consumer's home insurance prior to working on a home.

The transfer agent 240 can organize the retrieved consumer information, which can include consumer demographic information and any of the additional information types previously described and received by the CIS, according to merchant preferences. Further, the transfer agent can format the retrieved consumer information using a suitable markup language such as HTML or XML so the merchant can view the information as a markup language document via the network connection prior to transferring the information to the merchant's computer program. After organizing the retrieved consumer information, the consumer information can be transferred directly to one or more computer programs in a merchant computer system such as merchant computer systems 250, 260, and 270 shown in Fig. 2. In one embodiment, the transfer agent 240 can contain data structures 245 for associating merchants having access to the CIS with one or more computer programs. Each data structure 245 further can indicate the type of consumer information and formatting of that information used by the
20 various computer programs stored within the data structure. Thus, during a registration process where a merchant can obtain a merchant identifier and a password or other access code for accessing the CIS, the merchant can inform the CIS of which computer

programs the merchant uses. Notably, the data structure 235 also can store a merchant identifier and the merchant access code. In another embodiment, the merchant can specify which computer program consumer information is to be transferred before initiating the transfer. In that case, the merchant can be presented a list of available selections from which to choose.

In operation, the transfer agent 240 can transfer consumer information directly into a user interface of the computer program such that the data fields of the user interface can be automatically filled in with the appropriate consumer information. For example, the transfer agent 240 can insert the consumer's first name into the first name field of the computer program user interface. Similarly, the transfer agent 240 can continue to place any retrieved information into the appropriate data fields of the computer user interface.

The transfer agent 240 can utilize screen scraping technology to extract information from the markup language document presented to the merchant. After extracting items of consumer information, the items of the consumer information can be transferred to the merchant computer system. Alternatively, the transfer agent can parse items of consumer information from the markup language itself. For example, the transfer agent 240 can remove the formatting tags or search for particular tags of the markup language to extract information that follows. Notably, the transfer agent can use one or more templates stored the data structure 245 to locate data items within the markup language document. In another embodiment, the transfer agent 240, already can be in receipt of consumer information without markup language formatting. In that

case the received consumer information can be transferred directly to the merchant computer program without the need for parsing of markup language or screen scraping. Further, the types of items of consumer information, such as first name, last name, phone number, insurance carrier, and group number, for example, can be identified by the placement of that information within the information received from the network location. Accordingly, after formatting that information using a markup language, the transfer agent 240, after any subsequent screen scraping of that markup language document or parsing of markup language, can identify information item types by placement of those items within the markup language document.

The transfer agent 240 can access the data structure 245 to determine the particular computer program used by a merchant. Accordingly, the data structure 245 can indicate the format of the user interfaces used by that computer program. For example, in the case of a Windows computer program, the data structure 245 can contain the field identifiers of the merchant's computer program user interface to identify the user interface fields where consumer information can be transferred. Alternatively, if the merchant computer program incorporates Microsoft® Active Accessibility®, then the transfer agent 240 can identify fields of the merchant's computer program user interface using that technology. For non-Windows computer programs, the data structure 245 can contain one or more coordinates specifying the location of the user interface fields of the merchant computer program. For example, in the case of character based user interfaces, the coordinates can be specified as a column and

character locations. In the case of other graphical user interfaces, the unit of measure can be pixels.

Fig. 2 depicts the example where the patient name "John Smith" has been transferred into the appropriate field of one or more exemplary user interfaces 255, 265, and 275 on a merchant computer system. Also transferred has been the group number corresponding to John Smith. Thus, the consumer information can be transferred to the computer program, and specifically the data fields of the computer program user interface, without the merchant having to manually type any information. As mentioned, the data structure can indicate the specific computer programs used by a merchant, as well as the information and information formatting requirements of those computer programs. Using the data structure, the transfer agent 240 can transfer retrieved consumer information directly into any known computer programs.

It should be appreciated that although the DMS 220, the IMS 230, and the transfer agent 240 are depicted in Fig. 2 as separate computer programs, the programs can be implemented as a single more complex computer program. Additionally, the programs can exist in varying combinations. For example, DMS 220 can be combined with IMS 230, IMS 230 can be combined with transfer agent 240, or any other combination thereof. Alternatively, the components of CIS 200 can be distributed among one or more different computer systems within a computer communications network.

Fig. 3 is a flow chart for illustrating a process of collecting consumer information as performed by CIS 200 of Fig. 2. The method of the invention begins at step 300 where the CIS can be in a normal operating mode awaiting a request to retrieve consumer information. Accordingly, at the outset of the process of Fig. 3, it is presumed that the merchant has already established a communications session with the CIS. Further, it is presumed that the merchant has been successfully authenticated or logged on to the CIS using any of a variety of appropriate security protocols. For example, the merchant can establish a dial-up communications session or visit the CIS as implemented using a Web site as an interface. Regardless, the merchant can provide a merchant identifier and a password to the CIS in order for the CIS to authenticate the merchant. Notably, such login procedures and security protocols are well known in the art.

As mentioned, the CIS can contain a data structure associating each merchant having access to the CIS with the particular computer programs used on that merchant's computer system. Thus, once authenticated to the CIS, the CIS can identify each computer program being used by that particular merchant from the data structure. Accordingly, the CIS can be programmed to work with any of a variety of computer programs for processing consumer information. Once the merchant has been authenticated and the CIS has identified the computer programs being used by the merchant, the CIS can continually loop between steps 300 and 310 until the CIS receives a request for consumer information from the merchant. Thus, if a request for consumer information is received, the CIS can proceed to step 320.

In step 320 the CIS can receive a merchant request for consumer information. As mentioned, the request can be received via a computer communications network such as the Internet. Within the request, the merchant can specify a consumer identifier which can correspond to a consumer for whom the merchant is requesting consumer information. For example, the consumer identifier can be a social security number, a telephone number, or any other identifier which can identify that consumer. The consumer identifier can be a unique identifier, but need not uniquely identify the consumer because of the verification functionality included in the invention. Upon receiving the merchant request for consumer information, the CIS can identify the consumer using the consumer identifier within the merchant request. For example, a medical practitioner can enter a patient's social security number in a user interface on a Web site implementation of the CIS and activate a control to initiate a request for that patient's demographic and insurance information.

It should be appreciated, however, that the acquisition of some types of sensitive information can require a unique, secure identifier, such as a social security number, for processing. Accordingly, to access such sensitive information, the consumer social security number, rather than other user identifiers, can be required. After completion of step 320, the CIS can proceed to step 330.

In step 330 the CIS can incorporate the consumer identifier within a request for consumer demographic information and can transmit that request over the computer communications network. As mentioned, this request can be directed to one or more information suppliers, such as Web sites or other network locations connected to the

Internet which provide consumer demographic information. For example, the CIS can request the demographic information from one or more sources for the patient identified using the social security number provided by the medical practitioner. After completing step 330, the CIS can continue with step 340.

5 In step 340 the CIS can receive the requested consumer demographic information from the information suppliers. The received consumer demographic information can be displayed to the merchant so that the merchant can verify that the consumer demographic information being displayed is correct. Additionally, if more than one set of consumer demographic information is retrieved, the merchant can select the desired set of consumer demographic information. For example, if a telephone number is used as a consumer identifier, the CIS can retrieve consumer information for any consumers having that telephone number. Specifically, the CIS can retrieve the consumer information for each member of a family if those family members share the common telephone number specified as the consumer identifier. Another exemplary situation where multiple sets of consumer data can be retrieved is where a consumer identifier such as a social security number corresponds to a single individual having multiple address listings. This can be the case where the consumer has recently moved and that consumer's information has not yet been fully updated. Regardless of how multiple information sets can be retrieved, the CIS can provide the merchant an

20 opportunity to select the desired set of consumer information. For example, any retrieved information can be formatted using an appropriate markup language such that a merchant can view and verify the retrieved information in a Web site implementation

of the invention. Notably, the retrieved information can be presented to the merchant for verification whether or not multiple sets of information have been retrieved. If the merchant does not require any further consumer information, the CIS can proceed to step 370 after completion of step 340.

5 In step 370, if the merchant requires or requests further consumer information, then the CIS can continue to step 350. If not, the CIS can continue to step 380. Notably, the initial merchant request can specify the type of consumer information to be retrieved by the CIS. For example, the initial request of step 310 can specify that the merchant desires consumer demographic information as well as consumer insurance information. In that case, the CIS can initiate multiple requests for different types of consumer information. This information can be displayed to the merchant for verification. Alternatively, the merchant can request one type of consumer information independently of any other information. For example, the merchant can request consumer insurance information without requesting consumer demographic information. Similarly, the merchant can request consumer credit information without requesting consumer demographic information. Thus, although consumer demographic data was used as an example in the previous steps, a merchant can request any of the information types previously mentioned, without having to obtain the information in any particular order.

20 Still another embodiment can be a step by step process where the user is user guided through multiple steps of requesting information using multiple user interfaces.

In this embodiment, for example, the programming of the CIS can be tailored for

particular business computer programs. Thus, for medical service providers, the CIS can be implemented so that the merchant first obtains consumer demographic information, and then the merchant obtains consumer insurance information. For retailers, the CIS can be implemented to first obtain consumer demographic information and then obtain consumer credit information. In this manner, the merchant can interact with a user interface to obtain and verify one type of consumer information before obtaining and verifying a second or third type of consumer information.

It should be appreciated that in each of the implementations discussed, if multiple sets of consumer information have been retrieved by the CIS, the merchant can be presented with the multiple sets of information. The merchant can then select the desired set of consumer information, whether that information type be demographic, credit, public records, etc. Regardless of how additional consumer information is requested, if such information is requested, then the CIS can proceed to step 350.

In step 350 the CIS can request additional information concerning the identified consumer. This additional information can be insurance information including the consumer's insurance carrier, carrier information, and other policy details. Other types of additional consumer information can include, but are not limited to, court records, traffic violations, arrest records, real estate records, public filings, and credit information. Similar to requesting consumer demographic information, the CIS can initiate a request using the consumer identifier over the computer communications network for this additional information. Notably, the CIS can initiate one or more requests for data from various sources. For example, regarding public filings, the CIS can request such

information from one or more on-line sources of public information such as Web sites, whether operated by a commercial entity or a governmental entity. Another example can be requesting consumer insurance information corresponding to the consumer using the consumer identifier from one or more insurance carriers. After completion of
5 step 350, the system can continue to step 360.

In step 360, the CIS can receive the requested information. Notably, the CIS can receive the aforementioned additional consumer information from one or more sources. Similar to step 340, if the CIS retrieves more than one set of consumer information of a particular information type, each corresponding to the merchant specified consumer identifier, the retrieved sets of consumer information can be presented to the merchant. The merchant can then select the desired set or sets of consumer information. Notably, the CIS can include logic for selecting the correct set of consumer information based on previous merchant selections. For example, if two sets of consumer credit information are retrieved, the CIS can determine the set of consumer credit information most likely to be correct based on a previously obtained and selected set of consumer information. Thus, the CIS can display the favored set of consumer credit information as the first selection within a list of information sets presented to the merchant. In any case, the CIS can present the retrieved additional consumer information to the merchant for verification. For example, the CIS can format the retrieved information using a suitable
20 markup language for displaying the information to the merchant on a Web site implementation of the invention. After completion of step 360, the CIS can proceed to step 380.

In step 380 the CIS can transfer any retrieved and selected consumer information to the merchant computer system. Specifically, the CIS can transfer any retrieved information into a user interface display of a computer program on the merchant's computer system. In transferring the consumer information, the CIS can identify particular items of the consumer information according to item types such as first name, middle name, last name, insurance carrier, etc. By identifying the item types included within the retrieved consumer information, the transfer agent can place the appropriate data types into the appropriate fields of the computer program user interface of the merchant computer system. For example, the item of the consumer information identified as the first name can be entered into a field of the computer program user interface for the consumer's first name. The procedure can be repeated for each item type within the consumer information, i.e., last name, insurance carrier name, co-pay, type of insurance coverage, etc., so long as the computer program can accept or store that item type. It should be appreciated that because the CIS 200 retrieves consumer information from known sources, the CIS 200 can be programmed, for example using a look-up table or a table of templates, with the placement of particular items of consumer information such as first name, last name, or insurer name within received consumer information. In this manner, the CIS 200 can identify particular items of consumer information received from the various network locations.

Once transferred in this manner, the consumer information need not be manually entered by an employee of the merchant or written down by the actual consumer when visiting the merchant. Further, the information can be processed and edited within the

computer program in accordance with any functionality provided by the computer program. For example, upon the user making an appointment with a medical practitioner, the consumer information can be collected using the system of the invention. Thus, when the consumer, in this case a patient, enters the doctor's office, the medical practitioner's computer program already contains the patient's demographic and insurance information. As a result, the patient need not fill out any forms. Rather the medical practitioner can print a form already containing the patient's consumer information.

Fig. 4 depicts an exemplary user interface which can be used with the present invention. The exemplary user interface can be utilized with a scheduling program. For example, a user such as a medical practitioner can select a time block 400 within the user interface to schedule an appointment or other office visit.

Fig. 5 depicts an exemplary user interface which can be presented responsive to selection of the time block 400 in Fig. 4. For example, the exemplary user interface of Fig. 5 allows a user to select a consumer name from list 410, in this case a patient, and further specify the type of appointment or service from list 420 to be provided during the patient's visit to the medical practitioner. An activatable icon 430 also can be provided for initiating a request to obtain consumer information.

Fig. 6 depicts an exemplary user interface which can be presented to a merchant so that the merchant can log in to the CIS. For example, the user interface of Fig. 6 can be presented to a user after a communication session is initiated between the merchant

computer system and the CIS. The exemplary user interface can include a field 432 for receiving a merchant username and a field 434 for receiving a merchant password. Additionally, navigational controls can be provided such as activatable icon 436.

Fig. 7A depicts an exemplary user interface which can be presented to a user after that user successfully logs in to the present invention. For example, the user interface can be presented in the case of an Internet Web site implementation of the present invention. In any case, the exemplary user interface includes one or more fields for receiving an identifier corresponding to a consumer or patient for whom information is to be requested. For example, field 440 can be included for receiving a patient social security number. Additionally, field 450 can be included for receiving a patient's telephone number. Additional activatable icons can be provided for navigating to the next exemplary user interface or to a previous exemplary user interface. For example, activatable icon 460 can cancel the process of requesting patient information. Activatable icon 470 can cause a previous exemplary user interface to be presented to the user. Activatable icon 480 can cause a next exemplary user interface to be presented to the user.

Fig. 7B depicts another exemplary user interface. Field 510 can be included for receiving a consumer identifier. Responsive to activating the activatable icon 515, consumer demographic information can be retrieved and displayed in fields 520.

Fig. 8 depicts an exemplary user interface which can be used to present retrieved consumer demographic information to the user. For example, the two sets of

demographic information shown in field 490 can correspond to the identifier entered by a user in the exemplary user interface of Fig. 7A or 7B. Notably, the two sets of demographic data retrieved by the system can be displayed so that the user can select the correct or desired set of demographic data. Further, navigational controls can be provided as previously described and can be included for returning to a previous user interface or proceeding to a next user interface. For example, if the user entered an incorrect consumer identifier, then the user can select the "BACK" activatable icon. Thus, the previous exemplary user interface of Fig. 7A or 7B can be displayed so that the user can enter the correct user identifier. It should be appreciated that the various controls for navigation and selection of items can be included within each exemplary user interface disclosed herein.

Figs. 9A and 9B depict exemplary user interfaces which can display a user selected set of demographic information to the user for verification. For example, the user can select a set of information from field 490 of Fig. 8. Thus, when the user proceeds and one of the exemplary user interfaces of Fig. 9A or 9B is displayed, the user can verify that the information presented is correct. Notably, the user need not select a set of consumer information as described in Fig. 8. Rather, the user can scroll through the data sets which can be displayed in a serial fashion using the exemplary user interfaces of Fig. 9A or 9B.

Fig. 9A can include fields 530 for displaying consumer demographic information. Fig. 9B can include field 540 for receiving and displaying a consumer identifier. User activatable icon 560 further can be included for initiating the retrieval of consumer

demographic information. Once retrieved, the consumer demographic information can be presented in fields 550.

Fig. 10 depicts an exemplary user interface for retrieving consumer insurance information or other additional consumer information after retrieval of consumer demographic information. Field 570 can be included for receiving a consumer identifier. User activatable icon 590 also can be included for initiating the retrieval of additional consumer information. Fields 580 can be included for displaying consumer demographic information to a merchant or user.

Fig. 11 depicts an exemplary user interface allowing the user to select one or more insurers from field 600 from which to request consumer information. For example, the user can highlight a desired selection and select the "NEXT" activatable icon. Additionally, the user interface contains a "PAYOR NOT LISTED" activatable icon 605 so that the user can type in a payor not listed in field 600. As mentioned, the present invention can contain data structures containing insurance carrier information and associated consumer information such that the user interface of Fig. 11 can be optional.

Fig. 12 depicts an exemplary user interface allowing the user to provide additional consumer insurance information in fields 610 to aid in the retrieval and verification of consumer insurance information from the insurer.

Fig. 13A depicts an exemplary user interface which can display retrieved consumer insurance information. For example, responsive to the user proceeding from the exemplary user interface of Fig. 12, i.e., activating the "NEXT" activatable icon, the

exemplary user interface of Fig. 13A can be displayed to the user. Notably, the retrieved consumer insurance information corresponding to the selected consumer demographic information, and further corresponding to the consumer identifier, can be presented. Additionally, it should be appreciated that the consumer insurance information, as shown in field 500 of Fig. 13A, can include the patient's insurer, group number, identification number, the specific policy parameters such as co-pay amounts for various services, as well as the percentage of particular service expenses covered by the medical insurer.

Fig. 13B, similar to Fig. 13A, depicts an exemplary user interface having a field 620 for displaying consumer insurance information, or other additional retrieved information. Fig. 13C depicts yet another exemplary user interface having a field 630 for displaying retrieved consumer insurance information. Notably, the user interface of Fig. 13C can be used to present consumer information which has been formatted using a markup language. Fig. 13D also depicts an exemplary user interface having a field 640 for displaying retrieved consumer insurance information.

Fig. 14 depicts an exemplary user interface having activatable icons 650 which allow the user to specify the computer program to which the transfer agent of the CIS will transfer any retrieved consumer information. Notably, this user interface can be displayed to the user during a registration process such that the CIS can store that information and need not ask the user for that information in the future. Alternatively, the CIS can present the exemplary user interface prior to each transfer of consumer

information to the user's computer system. Regardless, the user can be presented with the exemplary user interface during an administration function available within the CIS.

Figs. 15A and 15B depict exemplary insurance information for an individual. The exemplary insurance information is representative of the insurance information which
5 can be retrieved by the invention disclosed herein.

The method described herein can be iterative such that the merchant can continue to request additional consumer information which the CIS has been programmed to provide. Further, it should be appreciated that the CIS can transfer different types of consumer information to one or more different computer programs within the merchant computer system. For example, the CIS can transfer demographic information to a scheduling computer program and insurance carrier information to a billing computer program. The consumer information also can be transferred to one or more user interfaces of the plurality of computer programs.

The present invention can be realized in hardware, software, or a combination of hardware and software. A method and system for retrieval and transfer of consumer information according to the present invention can be realized in a centralized fashion in one computer system, or in a distributed fashion where different elements are spread across several interconnected computer systems. Any kind of computer system or other apparatus adapted for carrying out the methods described herein is suited. A
15
20 typical combination of hardware and software could be a general purpose computer system with a computer program that, when being loaded and executed, controls the

computer system such that it carries out the methods described herein. The present invention can also be embedded in a computer program product, which comprises all the features enabling the implementation of the methods described herein, and which when loaded in a computer system is able to carry out these methods.

- 5 Computer program means or computer program in the present context means any expression, in any language, code or notation, of a set of instructions intended to cause a system having an information processing capability to perform a particular function either directly or after either or both of the following a) conversion to another language, code, or notation; b) reproduction in a different material form.